C++ Programming

Step-by-Step

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C++ PROGRAMMING: STEP BY STEP

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17. ARRAYS

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Abstract

An array is used to store and process a **collection of data of the same type**. Let me emphasize that an array can hold **multiple values of the same type**; it cannot hold values of different types (we saw that a struct can do that). An array may also be called a list. If you want to write a program to find the central tendency measure (mean) of a set of test scores you need to have a variable that could hold multiple integers instead of assigning an identifier for each score. An array is the answer to your need.

17.1 Declaring an Array

Any program that you might write should be general enough to apply to different situations; the program you are about to write should not only let us calculate the mean for examination of paper one but also all subsequent examinations. It needs to decide about maximum number of examination papers to consider and this becomes array size. Arrays are known as static lists because changing the size of an array once fixed you need to change the code and recompile. Before using an array, it has to be declared. To declare an array of 50 scores declare it like any other integer variable, but put a [50] in the square brackets: **int scores[50].** This tell the system that an array of size 50 and be holding inter values.

Just because we declared an array for 50 elements, there is no need to enter all 50 scores. We can enter any number of scores up to 50.